National Biodiversity Assessment 2018:

Preliminary assessment of data gaps and challenges
What is the NBA?
Collaborative effort to synthesise the best available science on SA's biodiversity to inform decisions in a range of sectors.

But also:
• build capacity
• coordinate, plan and share work within SANBI
• promote alignment & collaboration between partner institutions

REALMS
- Terrestrial
- Freshwater (wetlands & rivers)
- Estuarine
- Coastal
- Marine

THEMES
Assessment of Biodiversity
- Describe biodiversity

| Genetic |
| Species |
| Ecosystems |

Describe pressures on biodiversity and their trends over time
Assess the status of biodiversity
Determine the trends in biodiversity status over time
Describe the range of responses to biodiversity pressures
Describe the range of benefits of biodiversity
NBA 2018 products

Increasing technical detail

Increasing accessibility

Summary flyer for politicians and general public.
Video?
Website.

Launch:
aiming for 22 May 2019

Technical Reports for Decision-makers
- Terrestrial Report
- Freshwater Report
- Estuarine Report
- Marine Report
- Genetics Report

PLUS data served by SANBI

Increasing technical detail
NBA 2018 Headline Indicators

Threat Status
- Species
- Ecosystems

Protection Level
- Species
- Ecosystems

Method

\[ PL_{\text{Species}} = \frac{\sum_{PA} P_{PA} \times E_{PA}}{\text{Target}_{\text{Species}}} \]

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<tr>
<th>PL value</th>
<th>% of target</th>
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Protection Level
- Species
- Ecosystems
There are taxonomic groups with high numbers of Data Deficient species – either DD-T or DD-D. Need:

- Improved taxonomy
- Better monitoring for taxonomic groups other than plants, butterflies and birds.

Need quantitative abundance as well as occurrence data.
Data needs for the next NBA – species cont...

• More invertebrate work – both **fieldwork** and **mobilisation of collections** data. Only these are done: butterflies, dragonflies and some macro invertebrates in estuarine and marine realms

• Understanding efficacy of PAs for different taxa

• Freshwater Unit: FBIP proposal for 2019
Data needs for next NBA - ecosystems

- Iterative improvement of ecosystem maps and classification systems (from field data, remote sensing, expert desktop models)
  - Wetland map and classification
  - Review of river classification system
  - Verification of marine classification and map
Data needs for next NBA – ecosystems cont...

• Integration of ecosystem maps and classification systems into a national unified system and map
Currently there is **limited data** on certain pressures on biodiversity:

- Biological invasions – distributions, areas invaded, abundance of invasive species, and ecological impacts
- Overgrazing and or unsustainable rangeland management
- Habitat fragmentation effects and mechanisms (including electric fences)
- Marine pressure mapping
- Water quality and aquatic ecosystem condition
Data needs for next NBA – responses

Quantitative analysis of responses to pressures, include:

• Protected area and stewardship
• NRM programmes
• Bioregional Plans
• SEAs
• EIAs

3-way action plan

These are our key responses at a high level

Avoid further loss / maintain in good condition
Protect
Restore
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SANBI
Biodiversity for Life
South African National Biodiversity Institute
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The next NBA needs **time series data** on species populations, ecosystem condition and land cover. (also genetic diversity but this aspirational rather than practical at the moment)

We tend to use ‘baseline’ / single time point data in the NBA but this has less and less impact and utility as time goes on.

Ultimately decisions need to be based on a real trends based on multiple time points. What we aiming for in the National Monitoring Framework!
NBA 2018
is on its way!

Thank you